

EXPRESS MAIL MAILING LABEL NO.: EL544995865US

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re:	Patent Application of Eugene R. Zehler	:	Group Art Unit: Not yet assigned
		:	
Appln. No:	Not yet assigned	:	Examiner: Not yet assigned
		:	
Filed:	Herewith	:	
		:	
Title:	SHOCK ABSORBER CONTAINING BIODEGRABABLE FLUID	:	Attorney Docket No.: M 5850A-OS/LUAP

PRELIMINARY AMENDMENT

Prior to examination of the above-referenced application, Applicant respectfully requests entry of the following amendments. Also submitted herewith is an Information Disclosure Statement. This Preliminary Amendment is being filed simultaneously with the above-referenced continuing application, which is a continuation of Serial No. 08/760,055, which was filed on December 4, 1996. An extension of time has been filed in the parent application on even date herewith to maintain co-pendency.

Please amend the instant application, without prejudice, as follows:

In the Specification:

At page 1, above line 1 and below the Title of the Invention, please insert the following new section heading and new paragraph:

--CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims priority under 35 U.S.C. §120, and is a continuation of, U.S. Patent Application No. 08/760,055, filed December 4, 1996, the entire contents of which are incorporated herein by reference.--

In the Claims:

Please add new claims 38-84, as follows:

--38. (New) A shock absorber comprising a cylinder, the cylinder defining a chamber therein and containing a fluid; a piston rod sealingly projecting into the cylinder, the piston rod being axially displaceable with respect to the cylinder; a piston attached to the piston rod, the piston being slidably disposed within the cylinder to sealingly divide the cylinder into a first chamber and a second chamber; a passageway disposed in at least a portion of the piston providing for fluid communication between the first and second chambers; wherein the fluid comprises a biodegradable polyol ester, said polyol ester having a polyol component and a carboxylic acid component, the polyol component comprising a hindered polyol and the carboxylic acid component having from about 5 to about 18 carbon atoms; and wherein said fluid is at least 80% biodegradable.--

--39. (New) The shock absorber according to claim 38, wherein said hindered polyol is selected from the group consisting of trimethylolpropane, neopentyl glycol, pentaerythritol, dipentaerythritol, and mixtures thereof.--

--40. (New) The shock absorber according to claim 38, wherein said hindered polyol comprises trimethylolpropane.--

--41. (New) The shock absorber according to claim 38, wherein said carboxylic acid component comprises a monocarboxylic acid.--

--42. (New) The shock absorber according to claim 41, wherein the monocarboxylic acid comprises a linear carboxylic acid having from about 5 to about 10 carbon atoms.--

--43. (New) The shock absorber according to claim 41, wherein the monocarboxylic acid comprises a branched carboxylic acid having from about 5 to about 10 carbon atoms.--

--44. (New) The shock absorber according to claim 38, wherein said carboxylic acid component comprises a mixture of two or more linear monocarboxylic acids having from about 5 to about 10 carbon atoms.--

--45. (New) The shock absorber according to claim 38, wherein said carboxylic acid component comprises a mixture of C₅, C₆, C₇, C₈ and C₉ linear monocarboxylic acids.--

--46. (New) The shock absorber according to claim 38, wherein said carboxylic acid component comprises a mixture of a monocarboxylic acid and a dicarboxylic acid.--

--47. (New) The shock absorber according to claim 46, wherein said dicarboxylic acid comprises a short chain dicarboxylic acid, and a substantial portion of said biodegradable polyol ester comprises polyol components having all but one alcohol functionality of each hindered polyol esterified with the monocarboxylic acid.--

--48. (New) The shock absorber according to claim 47, wherein said polyol component comprises trimethylolpropane.--

--49. (New) The shock absorber according to claim 48, wherein said monocarboxylic acid comprises a linear carboxylic acid having from about 5 to about 10 carbon atoms.--

--50. (New) The shock absorber according to claim 48, wherein said carboxylic acid component comprises a mixture of two or more linear monocarboxylic acids having from about 5 to about 10 carbon atoms.--

--51. (New) The shock absorber according to claim 48, wherein said monocarboxylic acid comprises a mixture of C₅, C₆, C₇, C₈ and C₉ linear monocarboxylic acids.--

--52. (New) The shock absorber according to claim 38, wherein said fluid further comprises at least one component selected from the group consisting of antioxidants, corrosion inhibitors, antiwear additives, and seal conditioners.--

--53. (New) A shock absorber comprising a cylinder, the cylinder defining a chamber therein and containing a fluid; a piston rod sealingly projecting into the cylinder, the piston rod being axially displaceable with respect to the cylinder; a piston attached to the piston rod, the piston being slidably disposed within the cylinder to sealingly divide the cylinder into a first chamber and a second chamber; a passageway disposed in at least a portion of the piston providing for fluid communication between the first and second chambers; wherein the fluid comprises a biodegradable polyol ester, said polyol ester having a polyol component and a carboxylic acid component, the polyol component comprising trimethylolpropane, the carboxylic acid component comprising a mixture of C₅, C₆, C₇, C₈ and C₉ linear monocarboxylic acids; and wherein said fluid is at least 80% biodegradable.--

--54. (New) A shock absorber containing a hydraulic fluid for dampening movement of associated mechanical members therein, said hydraulic fluid comprising a biodegradable polyol ester, said polyol ester having a polyol component and a carboxylic acid component, the polyol component comprising a hindered polyol and the carboxylic acid component having from about 5 to about 18 carbon atoms; and wherein said fluid is at least 80% biodegradable.--

--55. (New) The shock absorber according to claim 54, wherein said hindered polyol is selected from the group consisting of trimethylolpropane, neopentyl glycol, pentaerythritol, dipentaerythritol, and mixtures thereof.--

--56. (New) The shock absorber according to claim 54, wherein said hindered polyol comprises trimethylolpropane.--

--57. (New) The shock absorber according to claim 54, wherein said carboxylic acid component comprises a monocarboxylic acid.--

--58. (New) The shock absorber according to claim 57, wherein the monocarboxylic acid comprises a linear carboxylic acid having from about 5 to about 10 carbon atoms.--

--59. (New) The shock absorber according to claim 57, wherein the monocarboxylic acid comprises a branched carboxylic acid having from about 5 to about 10 carbon atoms.--

--60. (New) The shock absorber according to claim 54, wherein said carboxylic acid component comprises a mixture of two or more linear monocarboxylic acids having from about 5 to about 10 carbon atoms.--

--61. (New) The shock absorber according to claim 54, wherein said carboxylic acid component comprises a mixture of C₅, C₆, C₇, C₈ and C₉ linear monocarboxylic acids.--

--62. (New) The shock absorber according to claim 54, wherein said carboxylic acid component comprises a mixture of a monocarboxylic acid and a dicarboxylic acid.--

--63. (New) The shock absorber according to claim 54, wherein said dicarboxylic acid comprises a short chain dicarboxylic acid, and a substantial portion of said biodegradable polyol ester comprises polyol components having all but one alcohol functionality of each hindered polyol esterified with the monocarboxylic acid.--

--64. (New) The shock absorber according to claim 63, wherein said polyol component comprises trimethylopropane.--

--65. (New) The shock absorber according to claim 64, wherein said monocarboxylic acid comprises a linear carboxylic acid having from about 5 to about 10 carbon atoms.--

--66. (New) The shock absorber according to claim 64, wherein said monocarboxylic acid comprises a mixture of C₅, C₆, C₇, C₈ and C₉ linear monocarboxylic acids.--

--67. (New) The shock absorber according to claim 54, wherein said fluid further comprises at least one component selected from the group consisting of antioxidants, corrosion inhibitors, antiwear additives, and seal conditioners.--

--68. (New) A method of dampening the movement of a mechanical member disposed within a shock absorber, wherein said mechanical member defines a first chamber and a second chamber within the shock absorber and includes at least one passageway for fluid communication between the first and second chambers; said method comprising providing a hydraulic fluid in the first and second chambers, the hydraulic fluid comprising a biodegradable polyol ester, said polyol ester having a polyol component and a carboxylic acid component, the polyol component comprising a hindered polyol and the carboxylic acid component having from about 5 to about 18 carbon atoms, wherein said fluid is at least 80% biodegradable, such that passage of the hydraulic fluid through the at least one passageway dampens the movement of the mechanical member.--

--69. (New) The method according to claim 68, wherein said hindered polyol is selected from the group consisting of trimethylolpropane, neopentyl glycol, pentaerythritol, dipentaerythritol, and mixtures thereof.--

--70. (New) The method according to claim 68, wherein said hindered polyol comprises trimethylolpropane.--

--71. (New) The method according to claim 68, wherein said carboxylic acid component comprises a monocarboxylic acid.--

--72. (New) The method according to claim 71, wherein the monocarboxylic acid comprises a linear carboxylic acid having from about 5 to about 10 carbon atoms.--

--73. (New) The method according to claim 71, wherein the monocarboxylic acid comprises a branched carboxylic acid having from about 5 to about 10 carbon atoms.--

--74. (New) The method according to claim 68, wherein said carboxylic acid component comprises a mixture of two or more linear monocarboxylic acids having from about 5 to about 10 carbon atoms.--

--75. (New) The method according to claim 68, wherein said carboxylic acid component comprises a mixture of C₅, C₆, C₇, C₈ and C₉ linear monocarboxylic acids.--

--76. (New) The method according to claim 68, wherein said carboxylic acid component comprises a mixture of a monocarboxylic acid and a dicarboxylic acid.--

--77. (New) The shock absorber according to claim 38, wherein said fluid is at least 90% biodegradable.--

--78. (New) The shock absorber according to claim 38, wherein said polyol component consists essentially of trimethylolpropane.--

--79. (New) The shock absorber according to claim 53, wherein said fluid is at least 90% biodegradable.--

--80. (New) The shock absorber according to claim 53, wherein said polyol component consists essentially of trimethylolpropane.--

--81. (New) The shock absorber according to claim 54, wherein said fluid is at least 90% biodegradable.--

--82. (New) The shock absorber according to claim 54, wherein said polyol component consists essentially of trimethylolpropane.--

--83. (New) The method according to claim 68, wherein said fluid is at least 90% biodegradable.--

--84. (New) The method according to claim 68, wherein said polyol component consists essentially of trimethylolpropane.--

Please cancel claims 1-37, without prejudice.

REMARKS

Claims 38-84 are currently pending in the instant application.

The Specification has been amended, pursuant to 37 C.F.R. §1.78, to insert a Cross-Reference to Related Applications section based upon a priority claim under 35 U.S.C. §120. It is submitted that the amendment to the Specification made herein introduces no new matter. The amendment to the Specification constitutes an addition of a new section heading and paragraph. Accordingly, pursuant to 37 C.F.R. §1.121(b)(1)(iii), no separate page captioned “VERSION WITH MARKINGS TO SHOW CHANGES MADE” is necessary. Entry of the amendment to the Specification made herein is therefore proper and respectfully requested.

Original claims 1-37 have been canceled and replaced with new claims 38-84.

New claims 38-43, 45-49, 51-59, 61-68 and 77-84 correspond to claims 38-73 which were pending in parent application, Serial No. 08/760,055, filed on December 4, 1996. New dependent claims 44, 50 and 60 have been added to claim a preferred embodiment of the invention wherein the acid component comprises a mixture of two or more linear C₅-10 carboxylic acids. Support for claims 44, 50 and 60 can be found in the Specification, for example, at page 4, lines 23-25. New dependent claims 69-76 have been added to claim various preferred embodiments of the method set forth in independent claim 68. No new matter has been introduced. All of the amendments to the Claims constitute cancellation of original claims and the addition of new claims. Accordingly, pursuant to 37 C.F.R. §1.121(c)(1)(ii), no separate page captioned “VERSION WITH MARKINGS TO SHOW CHANGES MADE” is necessary. Entry is therefore proper and respectfully requested.

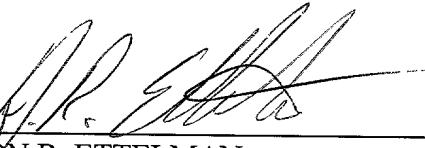
Prompt examination of the instant application in view of the amendments made herein is respectfully requested.

Respectfully submitted,

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(Date)

By:


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